

TITTLE (THE RELATIONSHIP BETWEEN ENVIRONMENTAL FACTORS AND DEVELOPMENT OF ALLERGIC DISEASE OF INFANT OVER THE TWO YEARS IN MOCEH (MOTHER AND CHILDREN'S ENVIRONMENTAL HEALTH STUDY))

Byung-Mi Kim, *Department of Preventive Medicine, School of Medicine, Ewha Medical Research Center, Ewha Womans University*

Eun-Hee Ha, *Department of Preventive Medicine, School of Medicine, Ewha Medical Research Center, Ewha Womans University*

Hyesook Park, *Department of Preventive Medicine, School of Medicine, Ewha Medical Research Center, Ewha Womans University*

Mina Ha, *Department of Preventive Medicine, Dankook University College of Medicine, Cheonan, Korea*

Yangho Kim, *Department of Occupational and Environmental Medicine, Ulsan University Hospital, University of Ulsan College of Medicine, Ulsan, Korea*

Yun -Chul Hong, *Department of Preventive Medicine, Seoul National University College of Medicine, Seoul, Korea*

Background and Aims: The prevalence of allergic diseases has increased in Korean children since 1995. Previous studies suggested that environmental factors may influence on the development of allergic diseases, but the relationship between environmental factors and allergic diseases remain unclear. Moreover, research for infant has been limited. The aim of study was to investigate the relationship between environmental factors and development of allergic disease over the two years

Methods: The prospective cohort study of Mothers and Children's Environmental Health (MOCEH) have been built up in 2006 and we enrolled 1,751 women before second trimester of their pregnancy and their partners in 2006-2010. Information on socio-demographic characteristics, psychosocial status, health behavior and environmental exposure were collected from an interview with trained nurses. After delivery, infants were followed up at 6, 12 and 24 months and the mothers are asked for information on hospital visits due to symptoms of atopic dermatitis, asthma and allergic disease such as allergic rhinitis, food allergy, and allergic conjunctivitis using the questionnaire. The relationships between environmental factors and development of allergic disease were measured by the generalized estimating equations (GEE) model. Statistical analyses were performed using SAS statistical software Version 9.1.

Results; Prevalence (%) of hospital visits due to symptoms of allergic disease was increasing with increase of age, even though atopic dermatitis and asthma were decreasing by age. The use of sofa was significantly associated with an increased development of atopic dermatitis of infants during the two years (Adjusted OR 2.87; 95% CI 1.87 to 1.108) after adjusting for gestational age, maternal age, maternal education, infant's sex, parity, breast feeding, postnatal ETS exposure and maternal weight by the GEE. In addition, use of air freshener was also related to increase the risk of allergic disease (Adjusted OR 3.72; 95% CI 1.001 to 1.143).

Conclusions; This study demonstrates that usage of sofa and air freshener may be risk factors that influence on the development of allergic disease. We also plan to examine the relationship among environmental factors, biomarker, and allergic disease using path analysis.

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